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BULLETIN
OF THE
TORREY BOTANICAL CLUB.

Vol. VIII.]

New York, June, 1881.

[No. 6.]

§ 57. A New American Fern.

By GEO. E. DAVENPORT.

(PLATE VIII.)

CHEILANTHES PARISHII, *n. sp.*.—Rootstock creeping, short, clothed with deep-brown linear-lanceolate scales, with darker, nearly black mid-nerves; fronds stalked, 5' to 7' tall; stipes approximate, 2' to 3' l., varying from light to dark-brown, clothed at the base with scales similar to those on the rootstock, passing gradually into broader pale-brown, or nearly white nerveless scales, above with more or less deciduous, slender pale scales and chaff; laminae 3' to 4' l., 1' to 1½' b., oblong-lanceolate, 3-4-pinnate, both surfaces scantily clothed with a coarse, entangled, woolly pubescence composed of long, jointed, colorless hairs; rachises beneath covered with narrow, jagged or toothed pale-brown, or nearly colorless reticulated scales, intermixed with hairs; pinnae alternate, unequally ovate, or oblong-ovate, obtuse, lowermost somewhat distant; pinnules oblong-ovate, obtuse, pinnately divided into deeply pinnatifid, or, in the lowermost pinnae, pinnate divisions; segments roundish, ultimate segments largest and 3-lobed; involucre very narrow, only partially enclosing the sori, and formed of the slightly recurved, unchanged herbaceous margins of the segments; sori scanty (in the specimens), consisting of a few light-colored sporangia at the ends of the forked veins.

Habitat.—Crevices of rocks, desert hill, San Diego County, east of San Bernardino, California, with *Notholaena Parryi*. Discovered by Mr. W. F. Parish, of the well-known firm of Parish Bros., San Bernardino, March. 1881.

Nothing definite is known of its abundance, but Mr. S. B. Parish, who sends it, writes me that it is probably scarce, as his brother, who discovered it, could find only a few plants (about three) in the neighborhood, after a careful search.

From the *Myriophylla-Fendleri* group it may be readily distinguished by the character of the distinct woolly tomentum; and, moreover, the slenderer scales on the under surface are not imbricated as in that group, and are wholly confined to the rachises. It very much resembles *C. lanuginosa* in the grayish woolly appearance of the face, the shape of the segments, and the narrow involucre; but differs from that species in the character of the rootstock and the *scaly rachises beneath*.

My thanks are due to Mr. Faxon for the pains he has taken with the drawing, and more especially for the microscopical analysis, which I was unable to make myself on account of the present condition of my eyes.

EXPLANATION OF THE PLATE.—Fig. 1. Plant, natural size. Fig. 2. Lower pinna. Fig. 3. Enlarged pinnule—ordinary form. Fig. 4. Magnified segment, showing veins and sori. Fig. 5. Sporangium.

Fig. 6. Spore. Fig. 7. *a*, scale from rootstock; *b*, scale from lower part of stipe; *c*, scale from rachis. Fig. 8. Magnified tomentum, showing jointed hairs.

Medford, Mass., May, 1881.

§ 58. On a Recent Determination of *Lepidodendron*.

By HERMAN L. FAIRCHILD.

The Annual Report of the State Geologist of New Jersey for 1879 contains an announcement by Prof. L. Lesquereux to the effect that *Lepidodendron* has been found in the Triassic rocks of that State. Such a discovery would be of the greatest importance to Palaeontology; and, being so opposed to all experience and expectation, would excite unusual interest. The passage from Prof. Lesquereux's letter to Prof. Cook, as it appears in the Report, page 26, reads as follows:

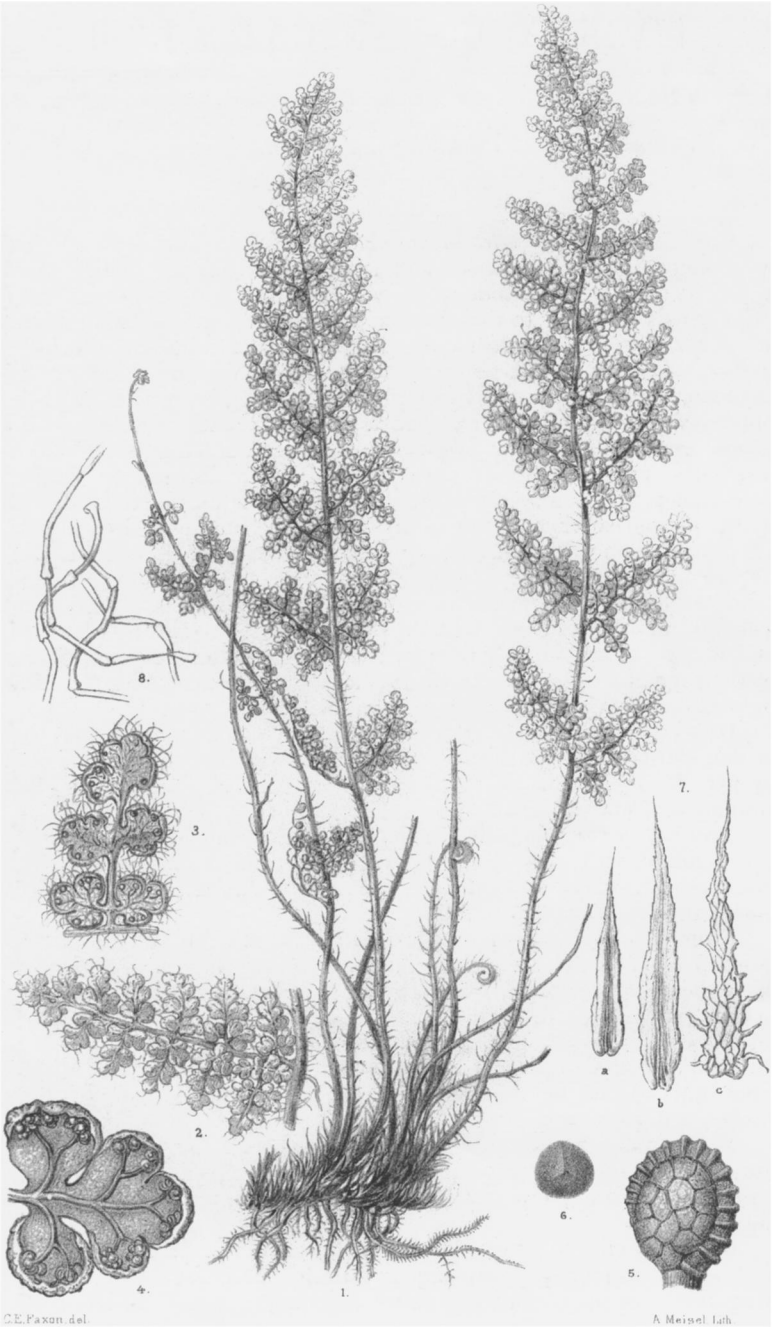
"The photographs are sufficient, if not for specific determination at least for positive reference of the specimens to *Lepidodendron*. Even I should say that the specimens represent *L. Weltheimianum*, Prest., as distinctly as a specific representation can be made upon a decorticated trunk of *Lepidodendron*. *L. Weltheimianum* is a leading species of the old red sandstone, found here, as in Europe, from the Sub-Carboniferous measures down to the Devonian, while until now we do not have any remains of *Lepidodendron* of any kind from the upper coal-measures (Permo-Carboniferous), or from higher up than the Pittsburg coal.

L. Weltheimianum is recorded only once from the true coal-measures; this by Eichwald, from the carboniferous sandstone of Russia. But European authors, among others Goeppert, doubt the identity of the Russian species with *L. Weltheimianum*, which is, moreover, extremely variable, and has been described already under about thirty different names."

I have had the opportunity of examining a series of photographs, duplicates of those sent Prof. Lesquereux, and with all proper deference to his authority, I should nevertheless say that his determination rests upon a very insufficient basis of facts.

The photographs show surfaces prominently marked with swelling areas separated by deeply furrowed lines. These areas are quite irregular in both size and shape. Some of them are regularly rhomboidal; but from this they vary to sub-linear. A quincunx arrangement is of course unavoidable with this shape. The surfaces shown probably represent the wood. But whether wood or cortex they certainly are entirely without the peculiar vascular markings which belong to the leaf-scars of *Lepidodendron*; and, indeed, they are destitute of any other definite characters.

In the first place, as regards the generic identification, it should be noted that, in the paragraph above quoted, Prof. Lesquereux admits the well known fact that *Lepidodendron* has never been found above the middle coal-measures. Now one might not wisely assert the impossibility of finding the genus in the Permian or even in the Trias. But many facts unite to render it extremely improbable. These facts are so familiar to many that it will be sufficient for the present purpose simply to mention a few of the most important.



CHEILANTHES PARISHII, n. sp.